Washington Higher Education Coordinating Board

FUND FOR INNOVATION AND QUALITY IN HIGHER EDUCATION

Final Report

June 2002

BACKGROUND

The Legislature appropriated $600,000 in grants in the 1999-01 biennium for the Fund for Innovation and Quality to encourage higher education institutions to develop innovative and collaborative solutions to statewide educational challenges. The Higher Education Coordinating Board (HECB) administered these two-year grants to the public four-year institutions.

The Higher Education Coordinating Board issued a request for proposals to the public four-year college and universities in July 1999 and received 23 proposals totaling $2.2 million from six institutions.

A Review Committee met to consider and make recommendations on the proposals. The 11-member committee included five members of the HECB staff, representatives of two of Washington's public baccalaureate institutions, two staff members from the Western Interstate Cooperative for Higher Education, a representative from the State Board for Community and Technical Colleges, and a representative of the Office of the Superintendent of Public Instruction. Committee members did not vote on proposals that originated from institutions they represented.

Consistent with the recommendations of the Review Committee, the Board authorized grant funding for seven proposals totaling $593,000 in grant funds.

All work under these grants is now complete, and the grantee institutions have completed final reports on activities and lessons learned.

SUMMARY OF ACTIVITIES AND LESSONS LEARNED

Following is a description of each of the seven projects that were undertaken and the purpose, activities/outcomes, and lessons learned from each.

1. Asynchronous, Community-Based Education for Registered Nurse Students in Washington State – Washington State University College of Nursing, Intercollegiate Center for Nursing Education – $109,499

Washington State University (WSU) successfully implemented a program of asynchronous (at different times) baccalaureate nursing instruction so that registered nurses in distant locations could obtain their degrees at home or at work. These students relied on e-learning for all of their

theory courses, while clinical work was arranged at distance sites. In addition, an online tutorial was developed to teach students how to navigate the nursing course Web site, and an online instructor evaluation system was implemented.

The specific outcomes of this project were:

1. The change in FTE enrollment from spring 2000 to spring 2001 was an increase of 31 percent, above the target increase of 25 percent.

2. One Native American student has graduated from the program, and three Hispanic students are currently enrolled, reflecting the goal of focusing on the needs of Native American and Hispanic students.

3. All ten theory courses have been redesigned to permit Web-based delivery.

4. All courses have evaluation criteria to measure course objectives, instructional methodology and student learning.

Student satisfaction surveys have documented the student learning and comfort level with Web-based instruction. Some students required a period of time to become familiar and comfortable with this approach, but a survey of 40 students enrolled in Nursing 400 indicated that 35 of the students would take another Web-based course.

Lessons learned include:

1. Re-engineering coursework to fit into a Web-based format is time-consuming for faculty and support staff. And, some faculty members are not totally receptive of technical staff input in the areas of presenting, questioning, and student evaluation.

2. Asynchronous courses are no less costly than traditional site-based courses. Some of the costs are different (software licenses, technical staff support, establishing contracted clinical sites), but end up about the same as site-based courses.

3. Substantial administrative oversight is required to promote and coordinate team efforts, and should be recognized as a cost of asynchronous courses.

4. Evaluation of course delivery and student learning is important to developing successful and cost-effective asynchronous courses, and the cost of these evaluations should be recognized.

The statewide lesson to be learned from this project is that asynchronous courses can be developed and implemented successfully with the appropriate level of planning, preparation, and ongoing review. Some courses may need to be re-designed to fit a Web-based approach, graphics need to be developed that support student interest and understanding, faculty and technical staff need to work together in new and sometimes unfamiliar ways, and student familiarity and comfort with Web-based coursework will improve over time. Also, ongoing communication/evaluation with students is important to understanding what is successful and

what can be improved. In summary, a rigorous and well-managed approach to Web-based education can provide a quality alternative to students who are limited by their distance from a site-based program.

2. Implementing A Critical Thinking Rubric For Assessment of Student Progress, For Diagnostic Use, and as a Teaching Tool – Washington State University – $59,526

WSU designed and implemented a new approach to course delivery and student evaluation that emphasizes critical thinking skills rather than the ability to memorize and retrieve information. This emphasis on developing critical thinking skills is applicable to virtually all programs and reflects a major goal of WSU educational efforts.

The specific outcomes of this project were:

1. A seven-dimension critical thinking framework was developed in a form that can be applied to many different kinds of courses and program areas.

2. Twenty-two faculty members were trained and incorporated an emphasis on critical thinking skills in the redesign and delivery of their courses.

3. The critical thinking rubric was also applied as an assessment and diagnostic tool to measure the development of critical thinking in students.

4. Faculty that integrated a critical thinking emphasis into their courses expressed satisfaction with the results in improved student reasoning skills, and most of them plan to continue using this approach.

The lessons learned include:

1. Development of critical thinking skills is not an integral part of many courses as they are currently designed and delivered.

2. Critical thinking skills can be developed systematically once courses are redesigned with this specific goal in mind.

3. Many faculty members are not trained or skilled in designing courses that explicitly emphasize critical thinking, although many of them are willing and able to integrate this aspect into their courses once they are given the tools to do so.

The statewide lesson learned from this project is that specific attention can successfully be paid to the development of critical thinking skills in students, and some traditional course designs and delivery methods are not very effective in building this skill. However, with some training and assistance it is possible for faculty members to successfully integrate the development of critical thinking into many different kinds of courses.

3. Multimedia Arts Program – Washington State University/Vancouver – $77,995

Washington State University/Vancouver, in conjunction with Clark Community College, Vancouver Heritage High School, Evergreen School District, Vancouver School District and the Vancouver School for Arts and Academics, worked together to create a computer-based multimedia arts curriculum. The new curriculum takes students from the high school level through programs at Clark College and WSU/Vancouver. A significant need exists for students with skills in Web design and related multi-media careers.

The specific activities/outcomes of this project were:

1. Area professionals in the Web and graphic arts industries were surveyed to build a curriculum that meets business needs and produces employable graduates.

2. Two certificate programs and an Associate in Applied Science degree were implemented at Clark College, and a baccalaureate degree in Electronic Media and Culture is undergoing the internal review process for implementation at WSU/Vancouver. Specific skill standards were developed for the Clark College certificate programs.

3. Training sessions in visual graphics for high school teachers were offered, which benefits students that will be moving from the high school programs into the Clark College programs.

4. Articulation agreements between Clark College and a number of high schools and districts have been implemented, with more expected.

The communication that has been fostered by this project among high school, community college, and WSU/Vancouver faculty is a very positive benefit. The eventual outcome of this communication and cooperation should be a progression of courses that builds skill levels that will enable students to choose entry into the workforce or continuing education.

Lessons learned include:

1. Organizational challenges are likely to arise when more than one public institution participates in a grant project, especially when a university branch campus is involved. Curriculum and class offering decisions at the WSU/Vancouver campus are often made in Pullman, which hampered the ability of Clark College to develop an articulation agreement with the Vancouver campus.

2. Creating new technology degrees presents two particular challenges: (1) the traditional academic structure of current degree programs does not always coincide with the types of skills necessary for the new technology degree, and (2) the new technology areas are constantly changing.

3. Maintaining contacts with industry to understand their changing needs should become an accepted part of faculty workload. This is usually not the case at the current time.

The statewide lesson to be learned from this project is that creating new technology skills and degrees that involve high schools, community and technical colleges, and baccalaureate institutions will test the capability of those institutions to be flexible and respond to changing needs. Traditional structures and academic organization may not always fit well with the multi-disciplinary skills that students may need for successful job preparation. Institutions will need to stress the focus on meeting student needs, maintain awareness of changing business needs, follow changes in technology, and be willing to adapt current structures to meet new demands.

4. Co-located and Co-designed Academic and Student Services for the Transferring Student – Eastern Washington University – $74,289

Eastern Washington University (EWU), in collaboration with the Community Colleges of Spokane, established a Transfer Student Center to fill a gap in admissions, advising, and registration that exists as students exit the two-year college system and enter a baccalaureate program.

The specific outcomes of this project were:

1. Improved up-front academic advising for students intending to transfer.

2. Reduced student frustration that should lead to less attrition of transferring students.

3. An expectation of improved academic performance of transfer students.

4. Better tracking of transfer student success.

5. Expansion of the Transfer Center at EWU to assist students from other community colleges is under consideration.

6. The value of extending the transfer center model to other institutions was demonstrated.

7. An opportunity was identified to increase the diversity of EWU students through additional transfers of students from underrepresented groups that started their higher education in the community and technical colleges.

Based on student satisfaction surveys and anecdotal experiences with specific students, it seems this effort was successful. Transfers are up at EWU by about 100 over last year, and many of these students may have been more successful as a result of the Transfer Center.
Lessons learned include:

1. A knowledgeable transfer advisor can help students with many more issues than originally envisioned. Much assistance was provided with coursework selection at the community college as they relate to future planning. Other student non-transfer issues were addressed and resolved. The information conduit was helpful in many ways.

2. Having a Transfer Center focused more EWU attention on the needs of and challenges facing transfer students. Having a representative of these students to surface issues and promote discussion was very helpful.

3. Discussion with transfer students identified barriers they face so that the institutions can work together to remove them.

The full-time transfer coordinator position is not being maintained due to budget limitations, but all institutions agree on the benefits provided from this successful effort. Current EWU staff from the Admissions Office have now scheduled regular visits to both Spokane community college campuses; the community colleges have offered office space, telephone, and computer support for continuing efforts; and EWU is scrutinizing its budget to determine if some of these services can be offered in the future.

The statewide lesson learned from this project is that there is a need for, and interest in, more information for students who are navigating the transfer process. Although funding additional transfer centers or efforts will be difficult during tight budgetary times, it is important for institutions to continue to explore ways to get information into the hands of students as early and clearly as possible.

5. Improving American Indian Student Reading Through Culturally Appropriate, Contextual Curriculum Units – The Evergreen State College – $87,366

The Evergreen Center for Educational Improvement at The Evergreen State College and the Office of Indian Education at OSPI collaborated with educators and cultural experts in the development of three reading units. These units are designed to present a culturally accurate view of Native American life that is relevant to Native American students. Originally, the plan was to develop curricular units including learning outcomes, classroom-tested activities, and performance assessments using commercially produced reading materials. However, the team quickly discovered a lack of culturally accurate reading materials upon which to base the units. So, a total of 22 fiction and non-fiction stories were developed that matched the essential questions and learning outcomes developed for each reading unit.

Enrolled tribal members wrote all but two of these 22 stories, and all the stories were thoroughly researched for cultural and historical accuracy. The units are designed to cover 23 weeks of instruction and reinforce the development of three cognitive learning skills: (1) **re-telling,** which includes participation by elders and other adults to present stories orally, (2**) now and then,** which requires analysis of issues from both historical and modern perspectives, and (3) **comparison and contrast,** which focuses on the similarities and difference among Native American tribes. Appropriate reading materials for Native American students are expected to boost reading performance and to improve their preparation for college.

The lessons learned include:

1. Most children's books depicting Native Americans depict a historical view of mostly Plains Indians, and are often culturally and historically inaccurate. These books are not relevant to past or present Pacific Northwest tribes.

2. The lack of relevance in these books to the lives and experiences of modern Native American students causes a disconnection between the students and their school experience.

3. Many members of the Native American community remain skeptical of how their history is portrayed in public schools, and there is a great need for historically and culturally accurate reading materials.

A CD-ROM is currently being produced that will contain the reading materials, curriculum elements, vocabulary and reading lists, a workshop on Culturally Responsive Teaching, and other cultural materials. The intent of the Evergreen Center is to make a CD-ROM available to all public and private schools in Washington.

This project has stirred great interest and support among the Native American community, and efforts continue to professionally publish the children's stories that were developed. The Washington State Tribes offered generous assistance in many areas throughout this project.

The statewide lesson learned from this project is to point out the value of reading materials that are relevant to the lives of students, which helps to foster a connection with their school experiences. The lack of accurate and culturally relevant children's stories is an impediment to the success of Native American students that can and should be addressed. This project was a necessary and successful start in that effort.

6. Mutual Transcript Research Enterprise – University of Washington – $57,167

The University of Washington and the State Board for Community and Technical Colleges created a database to share transcript and demographic information for research purposes. This database is called the Mutual Transcript Research Enterprise (MTRE). A common identifier supplied by a third-party matching process identifies students shared by the institutions. This masks personal identifiers and preserves student confidentiality while permitting the institutions to analyze student preparation and performance and demographic information, with the goal of improving the transfer articulation process.

The specific outcomes of this project were:

1. Development of training materials available on the Web, and a Web site for sharing data.

2. Ten to 15 training sessions provided for institutional researchers. Training has been offered at 32 separate sites.

3. Passwords were issued to representatives of each community and technical college according to security agreements.

4. A model process for sharing data was established between baccalaureate institutions and community and technical colleges for the purpose of improving transfer and articulation. Standardization of data formats has also been completed.

Based on a survey sent to community and technical colleges, and experience at the University of Washington, the data made available as a result of this project are being used for a number of purposes. These purposes include analysis of a variety of questions regarding transfer choices, demographics, grades, performance, completion, changing major requirements, and concurrent enrollment.

Lessons learned include:

1. The project demanded more technical staff effort than had been included in the budget. Software installation, connectivity, and training were more complicated than anticipated.

2. Staff at a number of institutions vary in their familiarity with individual software packages selected for use. Selection of software tools for multi-institution use may require more training than originally anticipated.

3. Continuing support of users is necessary. Staff turnover and hardware upgrades require continuing training and support.

4. The lack of standardized course names and numbers throughout the state makes analysis in some areas difficult. Inconsistency in reporting and changes to the data make analysis difficult and time-consuming.

5. Data from other baccalaureate institutions are needed to enhance the usefulness of the system. The project laid the foundation and the inclusion of more institutions will make it more useful.

6. Combining the community and technical college and four-year institution databases promotes valuable analysis and discussion. Additional data allows additional analysis.

The MTRE system continues in operation and is being developed and expanded as resources permit. The U.S. Department of Education points out the proportion of students attending more than one institution has been growing consistently over the last 30 years. Figuring out how to

meet the needs of these students requires accurate and current data that can be provided through a system such as MTRE.

The statewide lesson learned from this project is that there is a need by institutions for accurate and current information regarding the choices and performance of transfer students. Institutions can improve advising and other services if they fully understand the current trends, and can track the impact of any changes. Although direct funding for additional development of the MTRE system will be difficult during tight budgetary times, each institution that provides data to the system will be able to receive benefits from the analysis that becomes possible related to their students.

7. Program of Collaborative Science Resources for High School and College Students in Washington State – Central Washington University – $98,359

Central Washington University has enhanced its capability to offer science education and science-related academic advising resources to students and faculty in high schools and community colleges throughout the state. The particular focus is to improve communication and collaboration among science educators, and promote a better understanding of science opportunities and necessary preparation among potential science students. Many students and educators in rural central and eastern Washington are limited by time and distance from having direct contact with the science offerings of a baccalaureate institution.

The specific outcomes of this project were:

1. Workshops, discussions, and on-site visits by prospective high school and community college transfer students interested in science education were completed, including an opportunity for prospective students to see scientific instrumentation (e.g., a nuclear magnetic resonance spectrometer) in operation.

2. CWU has expanded its on-line capability to provide information and advising to potential science students through an interactive Web site so that students from remote sites can learn about CWU programs and how to prepare for them.

3. Seven different digital videos on different elements of the organic chemistry laboratory course have been completed to provide off-site students with learning opportunities usually limited to a laboratory setting. More videos are in production.

4. Communication among science educators in high schools, community colleges, and public and private universities has been expanded to discuss science education and collaboration, and the preparation of students for successful programs of study.
5. Science lectures were delivered on a multi-link basis to three or more sites simultaneously on a regular basis, demonstrating a cost-effective means of delivering science education to distant locations.

Lessons learned include:

1. The concept of using a Web-based science education advising program for middle and high school students is effective, particularly for students in rural areas. Linking this advising information with site visits by students to prospective postsecondary institutions is even more effective.

2. A critical aspect of successful outreach efforts is to establish connections among faculty at the various institutions involved. Workshops with the participation of high school, community college, and university faculty are a good approach.

3. Major limitations to the growth of electronic distance science education are the lack of technical staff to implement and maintain the systems, and difficulties in organizing course registrations and financial aid among institutions.

4. Creating the necessary laboratory opportunities for students at remote sites is an organizational challenge, but can be accommodated if administrators are supportive.

The statewide lesson learned from this project is that opportunities for quality distance education exist in all academic areas, even in the laboratory sciences. Some additional creativity is required to make distance education in laboratory courses successful, but it is possible. Also, providing an electronic science outreach and advising capability is very helpful to rural middle and high school students to support their interest and motivation and aid in their preparation for college work in the sciences.

FINANCIAL SUMMARY

Institution/Project	Grant Amount	Final Expenditure	Amount Returned
Washington State University Asynchronous nursing education	$109,499	$109,499	0
Washington State University Critical thinking rubric	$59,530	$59,526	$4
Washington State University Multimedia arts	$91,600	$77,995	$13,605
Eastern Washington University Transfer student services	$103,528	$74,289	$29,239
The Evergreen State College Improving American Indian student reading	$87,366	$87,366	0
University of Washington Mutual transcript research enterprise	$57,167	$57,167	0
Central Washington University Collaborative science resources	$99,897	$98,359	$1,538

As of April 30, 2002, the Higher Education Coordinating Board Fund for Innovation and Quality Account had a balance of $34,257.59. All current grants have been completed and closed out. The fund balance has been returned to the state general fund.

RESOLUTION NO. 02-09

WHEREAS, The 1999-2001 state operating budget provided $600,000 in grant funds for the Fund for Innovation and Quality to encourage higher education institutions to develop innovative and collaborative solutions to statewide educational challenges; and

WHEREAS, The Higher Education Coordinating Board was directed to administer these grants through a competitive process for the public four-year college and universities; and

WHEREAS, The institutions receiving the grants have completed their projects and submitted final reports regarding the activities completed and the lessons learned; and

WHEREAS, A summary of these final reports was presented to the Higher Education Coordinating Board at its meeting on June 11, 2002; and

THEREFORE, BE IT RESOLVED, That the Higher Education Coordinating Board accepts the final reports of the grantee institutions and the summary report presented by HECB staff.

Adopted:

June 11, 2002

Attest:

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Bob Craves, Chair

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Pat Stanford, Secretary